

APPLICATION
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TITLE: EXPIRING CONTENT ON PLAYBACK DEVICES
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EXPIRING CONTENT ON PLAYBACK DEVICES

BACKGROUND

This invention relates to downloading of media files through a communications network.

Music and other types of audio recordings are conventionally sold to consumers through stores or mail-order companies. When music or audio recordings are sold through these types of outlets, the recordings are usually distributed on tangible media, such as compact discs, magnetic cassette tapes, digital tapes, and so on. Another, alternative way of distributing music is to receive orders and to distribute music electronically over a communications network, such as the Internet. A person can connect to a music provider and download music over the Internet, either for free or for a fee. A few examples of providers that make digital audio files available of downloading are RealNetworks Inc., Audible Inc., MP3.com Inc. and Emusic.com Inc.

The downloaded music can be played back with appropriate audio playback software on the user's computer, either while the computer is connected to the Internet (that is, through streaming playback of the audio files), or at later time. Examples of common software for playing audio files include the RealPlayer and the Windows MediaPlayer software. The user may organize his or her downloaded audio files into a personal jukebox on his or her computer. The user may also optionally transfer the downloaded audio files from his or her computer to a portable player that can play back audio files, so that he or she can leave his or her computer and still be able to listen to the previously downloaded audio files.

When one buys music stored on a tangible medium, such as a CD or a cassette tape, the purchaser gets unlimited rights to playback the music for his or her personal use. Music that is provided through digital delivery to a playback device can have an associated expiration, such as time-limited playback rights, or rights that allow a user to play the audio files only a certain number of times. A user may therefore select music for a playback device and listen to the selected music during a certain time period or a certain number times for smaller fee, or even for free, compared to what he or she would have paid if the music were

stored on a tangible medium. If the user after this time likes the music, he or she can choose to refresh the expiration of the music and obtain new playback rights.

A problem with time-limited playback is that users may change internal clocks on playback devices that are used to keep track of the expiration dates or the number of remaining playbacks. As a consequence, the time limitation or the playback limitation imposed by the music provider will not work, and the music providers will have little interest in providing audio files for a reduced fee compared to the fee for unlimited playback. It is therefore likely that content providers would offer a more limited service or charge higher prices than what would be necessary if there were a way to guarantee that users could not manipulate the imposed expiration limitations on the audio files, leaving potential customers with less than a full range of options to choose from.

SUMMARY

In general, in one aspect, this invention provides methods, apparatus, and systems, including computer program products, implementing and using techniques for transferring one or more media files from a content server to a media playback device. A request of one or more media files to be transferred to a particular media playback device is received. The one or more media files have associated expiration rules. Information about the particular media playback device is obtained. Based on the information about the particular media playback device, it is determined whether the particular media playback device has the capability to enforce the expiration rules associated with the one or more media files. If the media playback device has the capability to enforce the expiration rules, the requested one or more media files are formatted such that they can only be rendered by the particular playback device and the formatted files and the expiration rules are transferred to the particular media playback device.

Advantageous implementations can include one or more of the following features. The media files can have associated content rights and it can be determined, based on the information about the particular media playback device, whether the particular media playback device satisfies the content rights associated with the one or more media files. If the particular media playback device does not satisfy the content rights, transfer of the one or more media files to the particular playback device is denied. The media files can have